



Support for Requested Rate for Dennis Emberling

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Resolution ALJ-357, adopted March 28, 2019, lists the range of rates for the 2019 of Experts. For experience of 13 or more years (applicable here), the range is \$185 - \$455 per hour.

Dennis Emberling's expertise and experience is highly unusual and a much-needed fit for contributing to Resolution E-5030, as well as all work undertaken by CPUC on protecting solar consumers. As seen from the summary CV (Attachment 2), he is an internationally recognized expert in many fields. His innovative work is in use by the United Nations, various governmental and nongovernmental organizations, environmental firms, and software and web design companies. His contributions to many fields, including General Systems Theory, Communication Theory, Information Theory, Management Science, and Organizational Science have influenced these disciplines for decades.

To these decades of experience, he has added seven years of concentration on residential solar in California. He has advised the solar industry, the real estate industry, consumer groups, and many individual solar shoppers and people victimized by deceptive solar practices.

Here are some of the connections between his fields of expertise and CPUC's work on protecting solar consumers (including the work on Resolution E-5030):

- Sophisticated mathematics
 - Calibrating solar forecasting software, such as SAM and PV Watts
 - Examining relationships among members of complex data sets for discrepancies
 - Statistical analyses and estimates of effects on the state of poor solar practices
- Database, software, and website design
 - Analyzing the DG Stats and CSI databases
 - Evaluating their quality, discovering poor correlations
 - Discovering ways to improve them
 - Understanding how they can best be used by the solar field and consumers
- Finance
 - Analyzing the complicated financial products offered to solar consumers
 - Evaluating their true costs
 - Discovering fraud and abuse in how they are presented to consumers
 - Calculating the true costs and savings of solar to homeowners: very complex
 - Incorporating all tax effects and inflation into these calculations
- Management consulting, specializing in quantitative analysis
 - Stakeholder analysis of the entire solar field
 - Analysis of economic interests of stakeholders
- Communication and information theories
 - Evaluating information quality of solar websites, marketing materials, info packet
 - Writing extended solar disclosure for CSLB, to be incorporated by CPUC as well
- Environmental science
 - Calculated environmental impacts and costs saved by residential solar for Calif.

Because of this extensive background, Emberling has been able to do work that would otherwise require the collaboration of a team of experts. This would necessarily take considerably longer than it took him, because no coordination among experts was necessary. This is one justification for the rate requested.

As a senior consultant, Emberling has been compensated as highly as \$1,000 per hour. It is not unusual for senior management consultants, for example, to receive \$2,000 per hour or more. CFOs are often compensated at this level or more. Leaders and innovators in many of the fields he has worked in are also compensated very highly.

Here are some experts whom CPUC has compensated above the high end of the range in the rate tables for their years of work:

- Glen Stransky, \$575/hr. in 2005, D1004023
- Glen Stransky, \$550/hr. in 2004, D1004023
- Peter Gleick, \$535/hr. in 2009, D1207015
- Garrick Jones, \$460/hr. in 2011, D1407020
- Jenni Marquiss, \$460/hr. in 2012, D1412070
- Jenni Marquiss, \$450/hr. in 2011, D1406045
- David Taylor, \$450/hr. in 2007, D1311018

To make the decision on an appropriate rate for Emberling's work simpler, we have not requested a rate outside the range in the current rate table. Instead, we request \$455 per hour, which is the top of the range. We think it is reasonable, given the broad range and depth of experience and expertise he brings to CPUC's work.

One final point. In proceeding R.1407002, including the work on Resolution E-5030, Emberling's work through Solar Consumer Advisor is the only pure representative for all of California's present and future solar consumers. A few groups represent small sub-classes of these consumers, such as low-income solar consumers, but solar is only a small part of their work. They are not experts in the whole range of solar consumer issues. Other groups represent the solar industry, the finance industry, the utilities, regulatory agencies, and others with financial stake in CPUC's decisions. But only Solar Consumer Advisor looks out for all current and potential solar consumers in California. We have tried to recruit other consumer advocacy organizations, such as Consumers Union, to join us in these efforts, but so far without success. Therefore, we think our work is of especial value to CPUC in its efforts to protect ratepayers in the area of solar.